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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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7590

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EXAMINER

TRAN, BINH X

ART UNIT

PAPER NUMBER

1765

DATE MAILED: 01/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/845,454

Applicant(s)

RANGARAJAN ET AL.

Examiner

Binh X Tran

Art Unit

1765

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 18 December 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: 10-12.

Claim(s) rejected: 1-9 and 25.

Claim(s) withdrawn from consideration: 13-24.

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☐ Other: \_\_\_\_\_

SUPERVISOR  
NADINE G. NORTON  
PRIMARY EXAMINER

Continuation of 5. does NOT place the application in condition for allowance because: The applicants argue, "Eriguchi, et al. discloses that etching is controlled based on a value that was preliminarily obtained by experiment. As such a threshold value was preliminarily obtained, a comparison of the initial value of change rate to the later value of change rate is not utilized to generate feed-forward control data as recited in this claim". This argument is not persuasive since the examiner never states that Eriguchi discloses a feed-forward control data. The examiner clearly recognizes that Eriguchi fails to disclose generating feed-forward control data in previous office action. The examiner considers Su teaches to generate feed-forward control data (not Eriguchi as argued by applicants).

The applicants further argue that Eriguchi does not teach or suggest, "analyzing measured etching parameter". The applicants provide the definition of the term "analyze" as "to examine in such a manner to ascertain the elements or nature of the thing examined" (by The American Heritage Dictionary). According to applicants, "at most Eriguchi, et al. teaches utilizing two disparate data points (initial change rate and current change rate) to obtain a "standard value" that itself was previously determined via experiment. The examiner disagrees. Eriguchi clearly teaches to analyze  $\Delta R/R$  with respect to etching time, photon energy, laser intensity, RF bias power, etc. (Fig 5, 8, 10, 13, 15-16, 19, 31, etc.) The examiner considers  $\Delta R/R$ , etching time, photon energy, laser intensity, and RF bias power are the elements and/or the parameters of the etching process to be examined.

The applicants further argue that "the microscope techniques as taught in Su are expensive, time consuming...when comparing to the optical system of the subject invention". This argument is not persuasive. Su clearly teaches the advantages of his invention is improving critical dimension (CD) during the etching process. The examiner still maintains that it is obvious to modify Eriguchi in view of Su by using feed-forward control data since it will improve critical dimension.

Respect to claim 25, the applicants provide the definition of the term "partitioning" as "the act or process of dividing something into parts" (by The American Heritage Dictionary). According to applicants, "the wafer has to be partitioned, and grid block can thus not be the entire wafer. It is possible, however, to partition a wafer so that it includes a single grid block (e.g., a single square within the wafer). Therefore, as described supra, a particular portion of wafer can be monitored, corrected, or deemed defective without requiring an entire wafer to be defective". This argument is not persuasive. As disclosed in previous office action, Su clearly discloses a means for partitioning a wafer into one or more grid block (col. 5 lines 6-18, Fig 1). Further, the examiner interprets that the wafer must have a front surface, back surface and side surfaces. The examiner reserves the right to interpret that the entire front surface as one grid block since there is no limitation in the claim that requires a grid block must be a single square shape. Therefore, it is possible that a particular portion (i.e. front surface) of a wafer can be monitored, corrected, or deemed defective without requiring an entire wafer (i.e. front, back, and side) to be defective.

Binh X. Tran